Abstract

The present invention provides a power-equalizing multi-channel fiber laser array, which comprises a pumping laser source, a 1xN ratio splitter, a plurality of WDM couplers, some pieces of EDFs, some pieces of fiber grating pairs, and a power-equalizing device (which may include variable optical attenuators). The power-equalization approach is realized by: (1) adding in some variable optical attenuators; (2) controlling the pumping power ratio to the individual channels by a 1xN variable ratio splitter; (3) adjusting the fiber lengths or the Er^{3+} concentration; or (4) adjusting the fiber gratings reflectivity.